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tora/s.m. tora/s.c. tora/s.c.

Figure 1 (cont. 1)

1060 CTATCTGTGGTGTTGAAGCCCATGTTATCGGGACTTAGGCTAAAACCTTAGTCAAGGGCGGRCFCAGTTCATGATGGGTGGTGTATCCAGGGGCGAGGAGGAGGAACAACA CTATCTGGGGTGTTGAAGCCCATGTTATCGGGGATTGGGTTAGGGCGGGGGGGG	1180 6GPATYGGGGANCCATGATCGGCAAATCGGTGTGGTGGTGGTGGTGGTGGTGGTGGTCGGTGGTGCTGGGTGCTTCATCGGCGGCGCGCGC	1320 Garatcarabgecretttgatagetergretteraggegegerafgergttteggttgeegtgatttgatgertetegateteggtaraegtattgatgetaaggeteg Garatcarabgecretttgataggtergretteraggegegergeggtttgggttgeggttgatgettgattgatgetegatettgatgetttagggegggggggg	1440 1440 1500 1500 1500 1500 1500 1500	1580 TYCCCCTTCTCGGRTATCGTACTACTACTATGAGCGCAACGATATCGAGGTGTAGGCGCCTATACTAACCCCGGTATTTAGCCAGGAAAATGGTTGAGCTGTTTTAGCTACTACTACTACTACTATGAGCGCAACGATATCGAGGTGTAGCTTAGCGAGGAAAATGGTTGAGCTGATTTAGGCGATATTTAGGCGATAGTTGAGGCGCTGATTGAAGCTTGAGCTGAGGTGATAGGTTGAGGCGTGATTGAGGTAGTTGAGGTGAGGAGAAAAAAAA	1700 1700 1700 1700 1700 1700 1700 1700	1810 BGCRAGTTTGAGATGCCTGACTTTCTGGARALAAGGTTATGTGCATTTTGGTGACGGGTGAAGTCTGGACGCGCCATGCAGACTTTAGAAGGATCCTGAAATCATCCACTAGGCACGCAGGGAAGTTTGGGGGGGG	1960 CTICAGGTITGAÁAFCTITA ÓCCGTAAGATIGATICAGTIACANGACIGIAGACIGAAGGTCACCCAACGIGAAAGGAGGAAACGAGGGAGGGAGGGAGGCGAAGGGAGGCGAAGGATGAAGATICAGTIACAGAGAGAGAGAGAGAGAGATGAAGGTIACAGAGAGAGAGAGAGAGAGAAAGGTCAGAGAAAAGGTCAGAGAGAAAAGGTCAGAGAGAAAAGGTCAGAGAAAAGGTCAGAGAAAAGGAGAAAAAGGTCAGAGAAAAGGAGAAAAAGGAGAAAAAGGAAAAAGGAAAAA
torA/S.m.;	torA/S.m.;	torA/S.m.:	torA/S.m.; torA/S.p.; r	torA/S.m.: T	torA/S.m. : Tr	torA/S.m.; GG	torA/S.m.; CT
torA/S.c.;	torA/S.c.;	EorA/S.c.:		torA/S.c.: T	LorA/S.c. : Tr	torA/S.c.; GG	torA/S.c.; CT
torA/9.p.;	torA/S.p.;	torA/S.p.:		torA/S.p.: T	torA/S.p. : Tr	torA/S.p.; GG	torA/S.p.; CT

Figure 1 (cont. 2)

tota/s.m.: Trgstrccagrcarccagacharctcgcagargreccagacharaccccagacharccagacharccccagacharaccagaccag	2140 2140 2140 2140 2140 2140 2140 2140	2500 2540 2540 2560 totals.m. : CGAGTTGAAAATACCAAGGCAAAGTGCAAAATC
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Figure 2

torA/Shewanella C

ATGAACAGAAGAGACTTTTTAAAGGGTATCGCCTCATCCTCTTTCGTTGTCTTAGGTGGCAG CTCAGTGTTAGCGCCCTTAAATGCCTTAGCCAAAACGGGCATCAATGAAGACGAATGGCTAA CCACAGGTTCACACTTCGGCGCCTTTAAAATGAAGCGCAAAAACGGCGTCATTGCCGAAGTG AAACCCTTCGACTTAGATAAGTATCCAACGGATATGATTAACGGCATCCGCGACATGGTCTA CAATCCATCGCGTGTACGTTACCCTATGGTGCGCTTAGATTTTTTACTCAAAGGTCATAAGA GTAATACCCATCAACGGGGTGATTTCCGCTTTGTTCGTGTAACATGGGACAAGGCATTAACA CTGTTTAAGCATTCATTAGATGAAGTCCAAACCCAATACGGTCCATCAGGTCTGCATGCGGG TCAAACTGGTTGGCGCCCACGGGTCAACTGCATTCCAGCACGAGTCATATGCAACGTGCGG TGGGGATGCACGGCAACTATGTGAAGAAATCGGCGACTACTCCACAGGTGCAGGCCAAACA ATTCTGCCCTACGTGTTAGGTTCAACCGAAGTGTATGCCCAAGGCACTTCATGGCCGCTGAT CTTAGAACACAGCGACACTATCGTGCTCTGGTCGAACGATCCGTACAAGAACCTGCAAGTGG GTTGGAATGCGGAAACCCATGAATCTTTTGCTTATCTTGCGCAGTTAAAAGAGAAAGTGAAG CAAGGCAAGATCCGTGTTATCAGTATCGACCCTGTGGTGACTAAGACCCAAGCCTATTTGGG CTGTGAGCAACTCTACGTTAACCCACAGACAGACGTGACTTTAATGCTGGCCATCGCCCACG AGATGATCAGCAAAAAGCTCTACGACGATAAATTTATCCAAGGCTACAGCTTAGGTTTTGAA GAGTTTGTGCCCTATGTGATGGGTACTAAAGATGGCGTAGCCAAAACCCCAGAATGGGCCGC GCCTATCTGTGGTGTTGAAGCCCATGTTATCCGCGACTTGGCTAAAACCTTAGTCAAGGGCC GCACTCAGTTCATGATGGGCTGGTGTATCCAGCGCCAGCAACACGGGGAACAACCCTATTGG ATGGCGGCGGTACTGGCCATGATCGGCCAAATCGGTCTACCCGGTGGTGGCATCAGTTA CCCGTAACTTGGACGAAAATCAAAAGCCACTATTTGATAGCTCAGACTTCAAGGGCGCGAGC AGCACAATTCCGGTTGCCCGCTGGATTGATGCGATTCTCGAACCTGGTAAAACCATTGATGC TAACGGCTCGAAAGTGGTTTATCCCGATATCAAGATGATGATTTTCTCGGGTAATAATCCTT **ACTGTTGATGTGAACTGGACGGCAACTTGCCGCTTCTCGGATATCGTACTACCCGCTTGTAC** TACCTATGAGCGCAACGATATCGACGTTTACGGCGCCTATGCTAACCGCGGTATTTTAGCCA TGCAGAAAATGGTTGAGCCACTGTTTGATAGCTTGTCGGATTTTGAAATTTTCACTCGCTTT GCCGCCGTACTTGGTAAAGAGAAAGAATACACCCGTAACATGGGCGAAATGGAGTGGCTAGA AACCCTCTATAACGAATGTAAAGCCGCCAACGCGGGCAAGTTTGAGATGCCTGACTTTGCGA CTTTCTGGAAACAAGGTTATGTGCATTTTGGTGACGGTGAACTCTGGACGCGCCATGCAGAC TTTAGAAACGATCCTGAAATCAATCCACTAGGCACGCCTTCAGGT,TTGATTGAAATCTTTAG CCGAGCGTAGCCATGGCGGCCCTGGTTCTGACAAGCATCCGATTTGGTTGCAGTCATGCCAC CCAGACAAACGCTTACACTCGCAAATGTGTGAGTCGCGAGAATACCGCGAGACCTACGCAGT CAATGGCCGTGAGCCTGTATATCAGCCCTGTCGACGCAAAAGCGCGCGGCATAAAAGATG GCGATATAGTGCGAGTCTTTAACGACCGTGGCCAACTGTTGGCGGGTGCAGTGGTATCGGAC AACTTCCCTACTGGTATTGTGCGGATTCACGAAGGCGCATGGTATGGGCCAGTAGGTAAAGA TGGTAGCACTGAAGGTGGGGCTGAAGTCGGCGCCCTGTGCAGTTATGGCGATCCTAACACCC TCACTTTAGACATAGGCACATCTAAACTTGCCCAAGCTTGCTCAGCCTATACTTGCTTAGTC GAGTTTGAGAAATACCAAGGCAAAGTGCCTAAGGTCAGCTCCTTCGATGGCCCTATCGAAGT CGAAATC

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Figure 3

Photobacterium phosphoreum

5'ACAATACTGAAAGATTGTAAGACATTGATATGGTGGTCAAATGATCCGATT AAAAACAGTCAGGTTGGCTGGCAGTGTGAGACTCATGGTTCTTATGAGTATTA TGCGCAATTAAAGCAGAAGGTCGCAGATGGTGGGATCCGTATGATCTCGGTCG ATCCTGTAGTGTCGAAATCGCAAAAATATTTTAACTGTGAGCACCAATACGTC AATCCTCAAACTGACGTTCCTTTCATGCTTGCTATTGCGCATACATTGTATAA AGAAGATCTGTACGATAAACAATTTCTGGAAACTTACACTTTAGGCTTCAATG AATTCTTGCCTTACTTATTGGGTACAGGCAAAGATAAAATAGCCAAAACGCCA GAATGGGCAGAGCCAATTTGTGGCGTTAAAGCAGAGGCTATTCGAGAATTTGC GTCAACAACACGGTGAGCAGCCTTATTGGATGGGAGCAGTGCTGGCTTCGATG TTAGGCCAAATAGGCTTACCTGGTGGAGGGATTTCCTATTCTCACTTTTACAG TGGCGTTGGGTTACCTTTCAGTACTGCAGCTGGGCCGGGGGGGATTTCCGCGTA ATGTTGATGAAGGCCAACAGCCGATTTGGAATAATAACGATTTTAAAGGCTAC AGTTCGACAATTCCGGTCGCAAGATGGATTGATGCGATCATGGAACCAGGTAA AAAAATTCAATATAACGGCGCTAATGTGGTGTTGCCTGATATTAAGATGATGG TCTTTAGTGGTTGTAATCCGTGGAATCATCATCAACAACGTAATCGTATGAAA CAAGCATTTAGAAAGCTGCAAACCGTGGTTAATATTGATTATACATGGACACC AACCTGTCGTTTTTCCGATATTGTATTACCTGCTTGTACCCAATTTGAGCGTA GTGATTTAGATCAATATGGTACTTATTCAACTAGCGGTATTTTAGCGATGCAT AAGCTAATTGATCCGCTTTATCAATCAAAAACAGACTTTCAGATATTTACTGA ATTAACCGAACGCTTTGGGAAA 3'

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20 100 120 100 120 120 120 120 120	140 210 220 210 210 210 210 210 210 210 21	260 TGAAGCGCAAAAAGGGCTCATTGCCGAAGTGAAACCCTTGGACTTAGATATCCAAGGATATGATTAACGGCATOGCGGCATOGTCGCGAACTACCATGCGTGTACCTTA CGACGGTGAAGGATGGTCGCTTTGGGGGGGGAAACGTTCGAATAAATA	380 TGGTGCGCTTAGATTTTTACTCAAAGGTGATACGCCACCACCACGGGGGTGATTTCCGCTTTGTGCGGGACAAGGCATTAACACTGTTTAACACTTCTTAACATTCATTAG TGGTGCGCGGGAATTCCTCGACAAGGGCGTGATACCCCCCAGCGGGGAAACCGTTTTGTGCGCGTGACAGGGGATGAAGCCTCGACATGTTCTATGAAGAACTGG TGGTGCGCCGGGAATTCCTCGACAAAGGGCGTGAACGCCGACCGCCCGGGGACTTCGTCGCGGTCACCTGGGATGAAGCCCTCGACTCGACAAGGAACTGA TGGTGCGCGCGCAATTCCTCGAAAAAGGCGTGAATGCTGATCGCCCGGGGAAGGGCGATTTTCGTCGCCCTCAGGTGAATGCGCTCGAAAAAGGCGTGAATGCTCGCGCGGCAGGCA	500 540 500 AUGRANACCARTRACERCATCRECAGGGGGAAACCGGTTGGCGCCCATCGTCAACTCCAGCACGAGGAAGCACAATCCAATGCAGGAATGCAGGGAATGCAGGGAATGCAGGGAATGCAGGGAATGCAGGGAATGCAGGGAATGCAGGGAATGCAGGGAATGCAGGGAATGCAGGGAAACTCAGGGGCGGAGAGGTGCCTTGCTGACGAAACCTTGCAGGAATGCAATGCAATGCAATGAGGAATGCAGGAATGAGGATTCAGGGAAAGCTACGGGCCGAAACGTAGAAAGCTAGGGCCGAAAGCAAAAGCAAAAGAAGAAAGA	BN3+ 610 120 120 120 120 120 120 120 120 120 1	DONITA 740 800 800 800 ACACCCACACTATCOTOCTCGAACGATCGATCAAGAACTGCAAGTGGGAATGCGGAAATCCCATGAATCTTTAGCTTAACGAGAAAGTGAAGCAAGGAAGG
AMGCCC	TTGTC: CCGGU HCGGCC: TCGGT	TGAAGC CCACGC CCCGGG	TGGTGC TGGTAC TGGTGC TGGTGG	ATGAAG AACGCG AGCGCG' AACGGGG'	GCAACT! GTANTA GCGGGT! GCGGCT!	ACAGCGI ACAGCAI ACACCGI ACACCGI
torA/S.m. torA/E.c. torA/R.s.	torA/S.m. CorA/E.c. torA/R.s. torA/R.c.	tora/s.m. : tora/k.s. : tora/R.s. :	torA/S.m.: torA/B.c.: torA/R.s.: torA/R.c.:	torA/S.m.; torA/E.c.; torA/R.s.; corA/R.c.;	tora/S.m.: tora/E.c.: tora/R.s.: tora/R.c.:	torA/S.m.: torA/E.c.: torA/R.s.:

Figure 4 (cont.

660 EORA/S.m.: GCAAGAFCCGCGTGATCAGTATCGACCCTVTGGTGACTATTTGGGCTGCGAGCTACTTTAC—920 920 940 FORMATTGAGTGATCAGCATCGATCGATCATCAGACCTATTATTGGGCTGCGAGCTACTTAC—————GTTAACCTACAGATGTGACAGATGTGCGCCACAGACTGACCTTAATGCTGCCCACAGATGAGACAGATGAGACAGATGAGACAGATGAGACAGATGAGACAGATGAGACAGAC	980 1080 1080 tora/5.m.: Togccoacagatgatcaacaaaaagctcaacaataaatttatccaaggctacaggttttgaggttttgaggtttgtgccctatgtgatcagcaagatgattgagggattgagggattgaggattgaggattgaggattgaggattgaggattgaggattgaggag	· · · · · ·	GCGAACAACCTATTG GTGAACAGTGGCGGTG GCGAACAGGCGCGCTGG GCGAGCGGCGCGCATTGG		TCGAACECGGTAAAAGCS TCGAACEGGGAAAGTGA TCAATCCGGCGGGGGGGGGGGGGGGGGGG	
tory tory tory	tora tora tora tora	torA/S.m. torA/E.c. torA/R.s. torA/R.c.	torA/S.m. torA/E.c. torA/R.s. torA/R.c.	tota/s.m. tota/e.c. tota/a.s. tota/a.c.	tora/s.m. tora/s.c. tora/n.s. tora/n.c.	tora/s.m. tora/g.c. tora/g.s. tora/g.c.

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Figure 4 (cont.

1700 1700	1810 1820 1820 1820 1820 1820 1820 1820 1830 1830 1820 1830	1980 2000 2020 2040 AGGTTATGTGCATTTGGCGGAGGCGCGCATGCAGGCTTTAGAAACGATCCTGAAATCAATC	2120 2120 2160 2160 2160 2160 2160 2160			2420 2520 2520 2540 2540 2540 25520
torA/s.m. torA/R.c. torA/R.s. torA/R.c.	torA/S.m. torA/E.c. torA/R.s.	torA/S.m. torA/E.c. torA/R.s. torA/R.c.	torA/S.m. torA/E.c. torA/R.s. torA/R.s.	torA/S.m torA/E.c torA/R.s	torA/S.m. torA/E.c. torA/R.s.	tora/s.m. tora/E.c. tora/R.s. tora/R.s.

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Figure 5

Salmonella typhimurium

5'ATGAAACAGGTGGTGTCGCCGCAGTTTGAAGCGCGTAACGACTTTGATATT
TTCCGCGATCTCTGCCGACGCTTTAACCGTGAAGCGGCATTCACGGAAGGTCT
TGATGAAATGGGCTGGCTGAAACGCATCTGGCAGGAAGGGAGCCAGCAGGGAA
AAGGTCGCGGTATCCACTTACCGATTTTCGAGGTGTTCTGGAATCAACAGGAG
TACATCGAGTTTGATCATCCGCAGATGTTTGTACGCCATCAGGCTTTCCGTGA
AGATCCGGACCTGGAGCCGTTGGGCACGCCAAGCGGTTTGATCGAGATTTACT
CCAAAACCATCGCCGACATGCAATACGACGATGGTCAGGGCCATCCCATGTGG
GCACTTACAATCGAACGCTCGCATGGCGGGCCGGGATCGCAGCGCTGGCCGCT
GCACTTACAATCCGTCCACCCTGATTTCCGTCTGCATTCCCAACTGTTGCGAG
TC 3'

Figure 6

TorA/Shewanella C

MNRRDFLKGIASSSFVVLGGSSVLAPLNALAKTGINEDEWLTTGSHFGAFKMK RKNGVIAEVKPFDLDKYPTDMINGIRDMVYNPSRVRYPMVRLDFLLKGHKSNT HQRGDFRFVRVTWDKALTLFKHSLDEVQTQYGPSGLHAGQTGWRATGQLHSST SHMQRAVGMHGNYVKKIGDYSTGAGQTILPYVLGSTEVYAQGTSWPLILEHSD TIVLWSNDPYKNLQVGWNAETHESFAYLAQLKEKVKQGKIRVISIDPVVTKTQ AYLGCEQLYVNPQTDVTLMLAIAHEMISKKLYDDKFIQGYSLGFEEFVPYVMG TKDGVAKTPEWAAPICGVEAHVIRDLAKTLVKGRTQFMMGWCIQRQQHGEQPY WMAAVLATMIGQIGLPGGGISYGHHYSSIGVPSSGAAAPGAFPRNLDENQKPL FDSSDFKGASSTIPVARWIDAILEPGKTIDANGSKVVYPDIKMMIFSGNNPWN HHODRNRMKOAFHKLECVVTVDVNWTATCRFSDIVLPACTTYERNDIDVYGAY anrgilamokmveplfdslsdfeiftrfaavlgkekeytrnmgemewletlyn **ECKAANAGKFEMPDFATFWKQGYVHFGDGELWTRHADFRNDPEINPLGTPSGL** IEIFSRKIDQFGYDDCKGHPTWMEKTERSHGGPGSDKHPIWLQSCHPDKRLHS QMCESREYRETYAVNGREPVYISPVDAKARGIKDGDIVRVFNDRGQLLAGAVV SDNFPTGIVRIHEGAWYGPVGKDGSTEGGAEVGALCSYGDPNTLTLDIGTSKL AQACSAYTCLVEFEKYQGKVPKVSSFDGPIEVEI

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Figure 7

TorA/P.p.: TorA/S.m.: TorA/E.c.: DorA/R.s.:	TILKDCKTLIWWSNDPIKNSQVGWQCETHGSYEYYAQLKQKVA GTSWPLILEHSDTIVLWSNDPYKNLQVGWNAETHESFAYLAQLKEKVK QTSWPLVLQNSKTIVLWGSDLLKNQQANWWCPDHDVYEYYAQLKRKSA QTAWPVVVENTDLMVFWAADPHKTNEIGWVIPDHGAYAGMKALKEK
TorA/P.p.: TorA/S.m.: TorA/E.c.: DorA/R.s.:	DGGIRMISVDPVVSKSQKYFNCEHQYVNPQTDVPFMLAIAHTLYKED QGKIRVISIDPVVTKTQAYLGCEQLYVNPQTDVTLMLAIAHEMISKK AGEIEVISIDPVVTSTHEYLGGEHVKHIAVNPQTDVPLQLALAHTLYSEN -G-TRVICINPVRTETADYFGADVVSPRPQTDVALMLGMAHTLYSED
TorA/P.p.: TorA/S.m.: TorA/E.c.: DorA/R.s.:	LYDKQFLETYTLGFNEFLPYLLGTGKDKIAKTPEWAEPICGVKAEAIREF LYDDKFIQGYSLGFEEFVPYVMGT-KDGVAKTPEWAAPICGVEAHVIRDL LYDKNFLANYCVGFEEFLPYLLGE-KDGQPKDAAWAEKLSGIDAETIRGL LHDKDFLENCTTGFDLFAAYLTGE-SDGTPKTAEWAAEICGLPAEQIREL
TorA/P.p.: TorA/S.m.: TorA/E.c.: DorA/R.s.:	ARGLVKNRTMIMFGWAVQRQQHGEQFYWMGAVLASMLGQIGLPGGGISYS AKTLVKGRTQFMMGWCIQRQQHGEQPYWMAAVLATMIGQIGLPGGGISYG ARQMAANRTQIIAGWCVQRMQHGEQWAWMIVVLAAMLGQIGLPGGGFGFG ARSFVAGRTMLAAGWSIQRMHHGEQAHWMLVTLASMIGQIGLPGGGFGLS
TorA/P.p.: TorA/S.m.: TorA/F.c.: DorA/R.s.:	HFYSGVGLPFSTAAGPGGFPRNVDEGQQPIWNNNDLKATVRQFRSQD HHYSSIGVPSSGAAAPGAFPRNLDENQKPLFDSSDFKGASSTIPVARWID WHYNGAGTPGRKGVILSGFSGSTSIPPVHDNSDYKGYSSTIPIARFID YHYSNGGSPTSDGPALGGISDGGKAVEGAAWLSESGATSIPCARVVD
TorA/P.p.: TorA/S.m.: TorA/E.c.: DorA/R.s.:	GLMRSSN AILEPGKTIDANG AILEPGKVINWNG MLLNPGGEFQFNG

Figure 8

Tora/s.t.: -----mkqvvspqfearndfdifrdlcrrfnreaaftegldemgwlk TOTA/E.c.: ---RGIIAMKQVVPPQFEARNDFDIFRELCRRFNREEAFTEGLDEMGWLK Dora/R.s.: ---RAILAMKKUVDPLYEARSDYDIFAALAERLGKGAEFTEGRDEMGWIS Tora/s.m.: ---RGILAMQKMVEPLFDSLSDFEIFTRFAAVLGKEKEYTRNMGEMEWLE Tora/s.t.: RIWQEGSQQGKGRGIHLPIFEVFWNQQEYIEFDHPQ--MFVRHQAFREDP TOTA/E.C.: RIWQEGVQQGKGRGVHLPAFDDFWNNKEYVEFDHPQ--MFVRHQAFREDP DOTA/R.s.: SFYEAAVKQAEFKNVAMPSFEDFWSEG-IVEFPITEGANFVRYADFREDP TOTA/S.m.: TLYNECKAANAGK-FEMPDED TELYOC-VALLEGED TorA/S.m. : TLYNECKAANAGK-FEMPDFATFWKQG-YVHFGDGE--VWTRHADFRNDP TorA/S.t. : DLEPLGTPSGLIEIYSKTIADMQYDDGQGHPMWFEKIERSHGGPGSQRWP DLEPLCTPSGLIEIYSKTIADMNYDDCQGHPMWFEKIERSHGGPG9QKYP TorA/E.c. : DorA/R.s. : LFNPLGTPSGLIEIYSKNIEKMGYDDCPAHPTWMEPAER-LGGAG-AKYP Tora/s.m. : EINPLGTPSGLIEIFSRKIDQFGYDDCKGHPTWMEKTERSHGGPGSDKHP LHLQSVHPDFRLHSQLLRV-----TorA/S.t. : Tora/E.c.: LHLQSVHPDFRLHSQLCESETLRH----DorA/R.s. : LHVVASHPKSRLHSQLNGTSLRD-----ToTA/S.m. : IWLQSCHPDKRLHSQMCESREYRE---

Figure 9

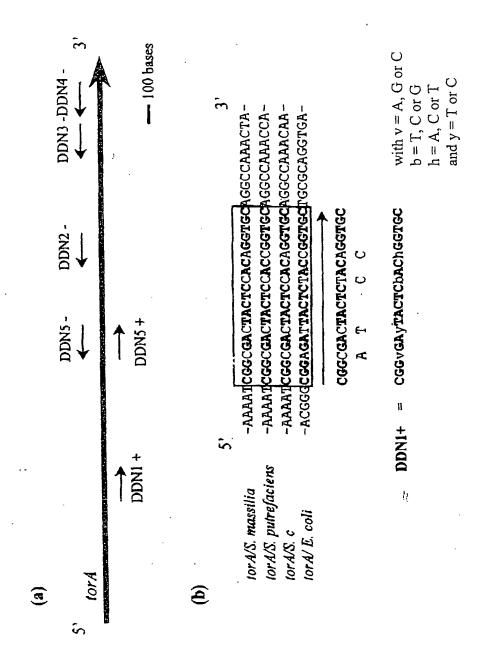


Figure 10

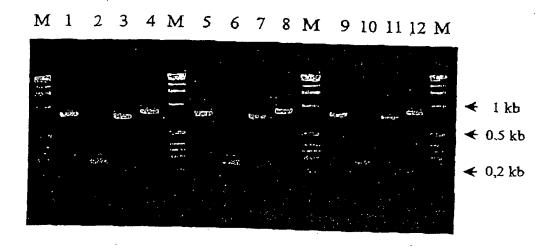


Figure 11

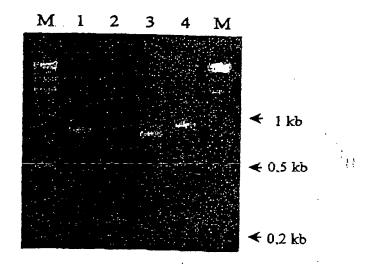


Figure 12

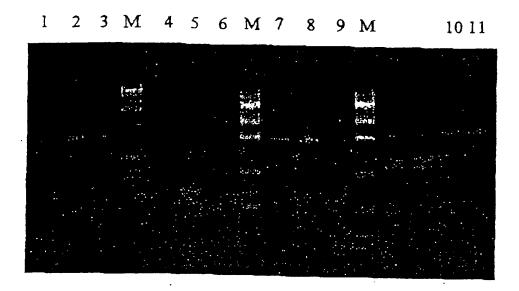


Figure 13

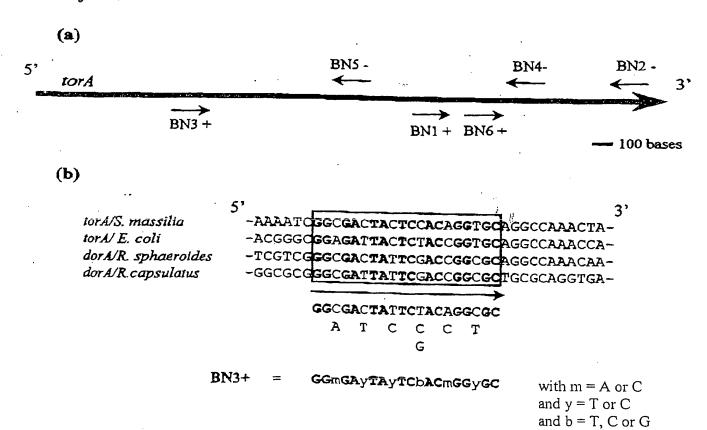


Figure 14

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390 404

VQKYLQEHSSTFVKKEH------LLKYLQMASDTAGKAHGDKKEEK VQRYVQMHAKOVEPEGAAE----

Torc/S.m.; Torc/E.c.; Dorc/R.s.;

MKWLTNLWRTLUNEPTKALTLGAVSISAFIMGIIFMGGENTALEATNTEAFCISCHSMESRPYQELQETVHWSNBFGVRATCPDCHVPHNF ; 90 	BC1+ SRKIARKOMEASHDVMG-WLFNTVNTPEKFEAKALEWASREWKRFDRONSLACKONCHN-YNSMKWEAM-SPLAQKOMKRAAEIDQSCIDCHKGI-AHHLPE : 186 PGMVKRKLEASNDIYQTFIAHSIDTPEKFEAKRAELAEREWARMKENNSATCRSCHN-YDAMDHAKQ-HPEAARGMKVAAKDNOSCIDCHKGI-AHGLPD : 193 WKLYRAKLLAAKOLMG-EIRGTIDTREKFEAHRLEMAETVWADMKANDSATCRTCHS-FEAMDFAHQ-KPEASKQMQQAMNEGGTCIOCHKGI-AHKUPD : 196	MGTARAPELIABVGAGVSSVETN-QTYYSALTKPLFFTDKGDVEACTLNVATKVKVLETGGKRIKIGIDGWRKKIGAGRVIYNDEGVNILSAQ : 278 MSSGFRKQFDDVR-ASANDSGDTLYSIDIKPIYAA-KGDKEASGSLLPASBVKVLKRDGDWLQIEITGWTESAGRQR-VLTQFPGKRIFVAS : 272 MASGYRALFSKLEKASQSLKPRKGETLYPLRTIEAYLE-KPSGEKAKADGRLLAATRMQVVDVTGDWVQVAVKGWQO-EGAERVIYEKQGKRIFNAA : 291	BC3- LTKDAAETGGVIQTFEEKEDPNTGLKWGRIEAQIWTDKDYLLTELQPLWGYARDTFRSSCSVCHTQPDEAHFDANTWPGMFQGMLAFVNMDQDTQAL : 375 IRGDVQQQVKTLEKTTVADTINTEWSKLQATAWRKGDWVNDIKPIWAYADSLYNGTCNQCHGAPETAHFDANGWIGTLNGWIGFTSLDKREERT : 366 LAPAATGSVVPGASMVDPDTEQTWTDVSLTAWVRNRDLTGDQEALWQYGKQMYNGACGHCHVLPHPPHFLANGWIGTLNAMKSRAPLDDEQFRL : 385
Torc/S.m.: Torc/E.c.: Dorc/R.s.:	Torc/S.m.: 6	Torc/S.m. : M	Torc/s.m.: L
	Torc/E.c.: F	Torc/E.c. : M	Torc/E.c.: I
	Dorc/R.s.: 6	Dorc/R.s. : M	Dorc/R.s.: L

Figure 15

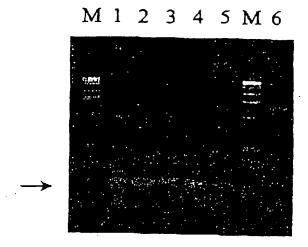


Figure 16

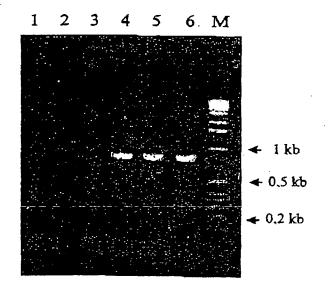


Figure 17

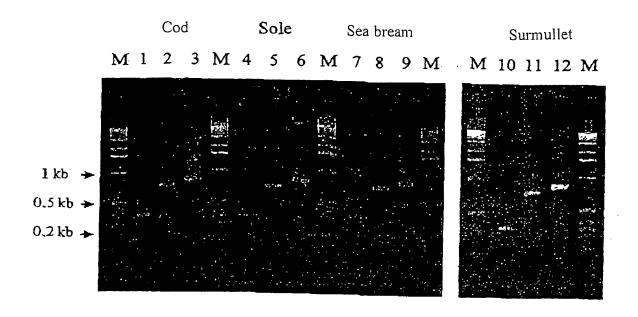
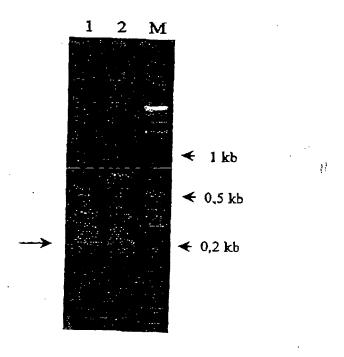


Figure 18



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Figure 19

torA/S.m. torA/S.c	: Atgaacagagacattittaaaaggct : Atgaacagacattittaaagggta : Atgaacagagacttittaaagggta	atgaacagaagagacttttaaaaggctti Atgaacagaagactttttaaagggtatk Atgaacagaagactttttaaagggtatk	tracctcarctctttcgttgctttrggtgglrgctrgtrctrgcgcctttaatrcgctggccatatactggcctgattractggctgattgatgggcttaa pcgcctcarcctctttrcgttgtcttrgcaggcaggcrggtttaacgccgttaatgccttagccaaargggattgatgatgatgatggtaac rcgcctcarcctgttggtgttgcttrggtggcaggctgatgttagggcctttaatggcttaggcaaarggggtgatgatgatgatgatgatgatgatgat	TTCGTTGCT TTCGTTGTC	'TTAGGTGGCA TTAGGTGGCA TTAGGTGGCA	GCTCAGTACTI GCTCAGTGTTI GCTCAGTGTTI	agegeetta Nacgeeetta Neegeeetta	AATGCCTG AATGCCTTA AATGCCTTA	gccaatacte gccaaagggg gccaaaaggg	GCCTGAATGA GCATCAATGA GCATCAATGA	aaacgaatgg Mgatgaatgg Mgacgaatgg	STATES OF THE STATES
tora/s.t.	. 140	0	160	1 1 1 1 1	190		200		220		240	
torA/S.p. torA/S.p. torA/S.m. torA/S.c.	CACTGGCTCCCACTTGGGGGCCTTTAAA CACAGGTTCACACTTGGGCGCCTTTAAA	cachggeterceacttgggggttaaattgaagggtaaaacggchtgattgccgaagtcaaggcttcgatttagataathtecaacggatatgaggttaacggtatccggggttaa Cachggttercacttggggggttaaatgaaggggaaaacggggtcattgccgaagtgaabccttcgacttagataagtatgaggatataacggchtccgcgggtgaacc Cachggttercacacttggggggtttaaaatgaaggggggggggggggg	TCAAGCGTAAAA TGAAGCGCAAAA TGAAGCGCAAAA	ACGCCATGAT ACGCCGTCAT ACGCCGTCAT	*RCCGAAGTCI TGCCGAAGTGI TGCCGAAGTGI	AAAGCCTTCG AAACCCTTCG	ATTTAGATAA ACTTAGATAA: ACTTAGATAA	ATATCCAAC	GCATATCATT GCATATCATT CCATATCATT	AACGGTATCC AACGGCATCC	GGGGTATGGT GGGGCATGGT GGGGACATGGT	CTAC
	. 260	. 290		300	• ;	310	•	340	-	960		1 1 1
torA/p.p. torA/s.p. torA/s.m. torA/s.c.	ACCATCCCCCGTGCGTTACCCGATGGT ATCCATCGCGTGCGTACCTATGGT ATCCATCGCGTGTACGTTACCCTATGGT	CGTTACCCGATGGTTCCGTTACGTTCCGTTACGTTCCTTATGGTCC	pogottagactititactraaaggecataagacataccagogggggattitoggttitgticgggacataggcataagget gcgcttagattititactcaaaggtcataaggtaataccatcaggggggattitoggcttiteticggtaacottggggcattaacat gcgcttagattititactcaaaggtcataagataataccatcaacggggtgattitogcttiteticgtgatacatggggataaacat	TTACTAAAG TTACTCAAAG TTACTCAAAG	GCCATAAGAG GTCATAAGAG GTCATAAGAG	TATTACCAGY	CAGCGGGGG	ATTCCCCT	TTGTTCGTG1	GACCTGGGAI PACGTGGGAC	PAAGCATTAA SAAGCATTAA SAAGGCATTAA	CACT
	360	400		420		440	•	460		480	-	200
torA/p.p. : torA/s.p. : torA/s.m. : torA/s.c. : torA/s.c. :	TTTAAACACTCACTCGATGAGGTCCAAA TTTAAGCATTCATAGATGAGGTCCAAA TTTAAGCATTCATAGATGAGTCCAAA	tttaacattcattaggagotccaarcaagtrogotctatogogotaaacoggagoaacoggogogocacoggogotaactoca tyccagorolagotatatocaacog c Tttaacattcattagtgagotccaarccaatrogotctatogogogogaacogatogogogogogogogogogogogogotaactocattccagorolagotatatocaa Tttaacattcattagtgagotccaacccaatrogotctgotogogogogogogogogogogogogogogogo	ccaastricgtecaticggetttranggegggggggggggggggggggggggggggggggggg	ATCGCCTTB ATCAGGTCTG ATCAGGTCTG	CACCCAGGACI	AAACTGGTTG NAACCGGTTGC	SCCCCCACA SCCCCCACA SCCCCCACA	GGGCAACTG	CATTCCAGG	CCAGCCATAT	CCAACGTGCG	00000
	٠	\$20	540	•	560	-	560	,	909		620	٥
torA/p.p.; torA/s.p.; torA/s.m.; torA/s.c.;	GATCCACGCTAATTTTGTGAAAAAATC GATGCACGCAACTATGTGAAAAATC GATCCACGCAACTATGTGAAAATC	ttgtgaaaaaatcgc atgttaagaaaatcgc atgtgaagaaatcoc	GGGGLCTACTCCACCGGTGCAGGCCAALCCATTCTGCCCTATGGATTAGGCTCAACCGAAGTATATGCCCAAGGCACCTCTTGGCCACTGATTATAG GGGGLCTACTCCACAGGTGCAGGCCAAACTATTCTGCCCTACGTGTAGGTTCAACCGAAGTGTATGGGCCAGGGCACTTCATGGCCGCTGATCTTAG GGCGLCTACTCCACAGGTGCAGGCAACAATTCTGCCCCTACGTGTAGGTTCAACCGAAGTGTATGCCCAAGGCACTTCATGGCCGCTGATTAG	CCGTGCAGG DAGGTGCAGG DAGGTGCAGG	CCAAACCATT CCAAACTATT CCAAACAATT	CTGCCCTATG! CTGCCCTACG! CTGCCCTACG!	rattaggete Kettaggete Kettaggete	AACCGAAGT AACCGAAGT AACCGAAGT	agtatatocccar agtgtatocccas agtgtatocccaa	GGCACCTCTT GGCACTTCAT GGCACTTCAT	GGCCACTGAT	E E
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torA/p.p.: torA/S.p.: torA/S.m.:	. Aaghtigtaagachtteathtogtogto . Aaanggcaacaghtigtogtotogtog . Aacacaggacactateotogtotogto	ITGATATOSTOGICA NTTGTGCTGTGGTCA ATCGTGCTGTGGTCG	aratgatecgrttrarargetrgetrgetrgetrgtgargeketrertgatetttrergitat trtgegerittrargerargergergegegetrefegt Arrcaitecttrekarargegragergeggtggbeggtggrarcertrargegetittgestrettgegattrarggargergegegetreregeg Graegritectrekargractgerastgggattggrapgeggarkeegtrgaatettesttrts	AAAAACAGTC NAAAACCTGC NAGAACCTGC	AGOTTGGCTG AAGTGGGCTG AAGTGGGTTGG	aratgatecgrttaarargetrggttgggtgggeggtgtgrkertcatggttettatggtat tatgegeafttaargegggggtgegt Aracafecettacaaracetgcaagtggggtgggtggreggegarccatgaggcetttgggtes etcgeggrattaaragagaagtecaagkagge Gaacgatecgtrcargaagaacetggaagtgggabtgegaracccatgaatetttgettat ettegggtbttaaaagagaaaltgaaggaaggc	ACTCATGGTT ACCCATGAGG ACCCATGAATA	CTTATGAGT CCTTTGCGT CTTTTGCTT	ATTARGCCA ACCTCGCCA ATCTTGCGCA	attrargcag Attraracag Gttraraggag	aaagticgcag baagticaaac baaagtgaagc	ATGG AGGG AAGG

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Figure 19 (cont. 1)

760 840 860 PGGGATCCTATCTCGGTCGATCCTGTAGTGTCGCAAAAATTTTAACTGTGAGCACCAAATCCTCAAACCTCAACTGACGTTCTTTCATGCTTACTTA	940 980 980 1000 980 TAARGARGARCTGARAACCCCAGAACTTACGCTTCAATGATTCTTGCCTTACTTA	1) 10 10.0 11.00 11.00 10.00 1	1140 1220 1240 1240 1240 1250 1240 1250 1240 1250 1240 1250 1250 1250 1250 1250 1250 1250 125	1320 13260 1	1940 1940 1940 1940 1940 1940 1940 1940
torA/p.p. torA/s.p. torA/s.m. torA/s.c.	torA/p.p. torA/s.p. torA/s.m torA/s.c	tota/p.p. tota/s.p. tota/s.m. tota/s.c.	torA/p.p. torA/s.p. torA/s.m.	tarA/p.p. torA/s.p. torA/s.m. torA/s.c.	tora/p.p. tora/s.p. tora/s.g. tora/s.c.

Figure 19 (cont. 2)

THE THE THE THE TOTAL TO	CTATARCOATGRANGECCCCANCGGCGAGTTTGCCTCACTTTGCCACTTTAGAACCAAGGTTATGACACTTTTGGTCAATTTTGGTCAATTATGGACGCCCACGCTCACTTTAGAA CTATAACGAATGTAAAGCGCCCAAGGTGGCAAGTTTGAGATGCTTGCGACTTTCTGGAAACAAGGTTATGGCATTTTGGTCAGTGAAGTCTGGACGCCCCCAAGTTTAGAA CTATAACGAATGTAAAGCGGCCAAGGTTTGAGAAGTTTGAGATTTGCGACTTTTCTGGAAACAAGGTTATGTGCATTTTGGTGAGGTGAACTTGGACGCGCCATGCAACTTTAGAA	80 1840 1860 1860	MICHADONOLINAMICO VOLUME CANADAMICA CANADAMI	. Vontrol i et l'oblitti forbattitact cottiticce ce cecte cotabara à l'estataca e l'estatats a cele a a tertac Tertascitiot cerattitor e teccet e ce c
ACGATCCTGABATCABCCCGTTAGGCACGCCTTCGGG ACGATCCTGABATCABTCGATAGGCACGCCTTCAGG ACGATCCTGABATCABTCCACTAGGCACGCCTTCAGG ACGATGGTGGTCGGGTTCGBATABATATCTATGTG AGTCATGGGGCCTGGCTTCTGACABATCCTATGTG AGCCATGGGGGCCTGGTTCTGACABAGCGGTTTG AGCCATGGGGGCCCCGGTTCTGACABAGCGGTTTG AGCCATGGGGGCCCCGGTTCTGACABAGCGGTTTGAGGGGGGCCCGGTTTTGAGAGGGCTGGTTTTGAGGCGTTTTGAGAGTGCTBABAGCGTGAGGCTTGTTATATCAGCCCTGTCGAAGATGCTAAAAGCGCTGAGCCTGTTATATCAGCCCTGTCGTCGAAAAAGCGCTGAGGCCTGTTATATCAGCCCTGTCGTCGAAAAAGCGCTGAGGCCTGTTATATATCAGCCCTGTCGACGCAAAAAGCGCTGAGGCCTGTGTATATATCAGCCCTTGTCGACGCAAAAAGCGCTGAGGCCTGTGTATATATCAGCCCTTCGTCGACGCAAAAAGCGCTGAGGCCTGTCTATATATCAGCCCTTCGTCGACGCAAAAAGCGCCTGAGGCCTTCGTCGACGCAAAAAGCCCTGTCGACGAAAAAGCCCTGACGAAAAACCCCTGTCGACGAAAAACCCCTGTCGACGCAAAAAACCCCTGACGCCTTCGACGCAAAAAACCCCTCGTCGACAAAAACCCCTCGTCGACGCAAAAAACCCCTCGTCGACGCAAAAACCCCTCGTCGACGCAAAAACCCCTCGTCGACGCAAAAACCCCTCGTCGACGCAAAAACCCCTCGTCGACCCAAAAACCCCTCGTCGACCAAAAACCCCTCGTCGACCAAAAACCCCTCGTCGACCAAAAACCCCTCGTCGACCAAAAAACCCCTCGTCGAAAAACCCCTCGTCGACCAAAAACCCCTCGTCGACCAAAAACCCCTCGTCGACCAAAAACCCCTCGTCGAAAAACCCCTCCTCGAAAAACCCCTCGTCGAAAAACCCCTCGTCGAAAAACCCCTCCTCGTCGAAAAACCCCTCCTCGTCGAAAAACCCCTCCTCGTCGAAAAACCCCTCCTCCTCGTCGAAAAACCCCTCCTCCTCGAAAAACCCCTCCTCCTCCTCCTCCTCCTCCTCCTCCTCCT	1900	Tatarcgaststargs csctars scortastat Tatarcgatstargs cscccarcs scortity Tatarcgatstargs cscccarcs scortity Tatarcaststargs cscccarcs scortity	1760 AACGAGTGTAAACCCGCTAACGCCGGGAAGTTTAAAGGAGGCGCAAGTTTTAAAGCCGCCCAACGCGGGGAAGTTTAAAGGCGGCCAACGCGGGGAAGTTTAAAGGCGGCCAAGGTTTAAAGGCGCGCAAGGTTTAAAGGCGGCGCAAGGTTTAAAGGCGGCCAAGGTTTAAAGGCGGCCAAGGTTTAAAGGCGCGCCAAGGTTTAAAGGCGCGCAAGGTTTAAAGGCGCGCAAGGTTTAAAGGCGCGCAAGGTTTAAAGGCGCGCAAGGTTTAAAGGCCGCGCAAGGTTTAAAGGCCGCGCAAGGTTTAAAGGCCGCGCAAGGTTTAAAGGCCGCGCAAGGTTTAAAGGCCGCGCAAGGTTTAAAGGCCGCGCAAGGTTTAAAGGCCGCGCAAGGTTTAAAGGCCGCGCAAGGTTTAAAGGCCGCGCAAGGTTTAAAGGCCGCGCAAGGTTTAAAGGCCGCGCAAGGTTTAAAGGCCGCGCAAGGTTTAAAGGCCGCGCAAGGTTTAAAGGCCGCGCAAGGTTTAAAGGCCGCGCAAGGTTTAAAGGCCGCGCAAGGCCGCGCAAGGTTTAAAGGCCCGCGCAAGGTTTAAAGGCCCGCGCAAGGTTTAAAGGCCCGCGCAAGGTTTAAAGGCCCGCGCAAGGTTTAAAGGCCCGCCGCAAGGTTTAAAGGCCCGCCGCAAGGTTAAAGGCCCGCCGCCAAGGTTTAAAGGCCCCGCCAAGGTTTAAAGGCCCGCCGCAAGGTTTAAAGGCCCGCCAAGGCCCAAGGCCCCAAGGCCCAAGGTTTAAAGGCCCCAAGGCCCCAAGGCTTAAAGGCCCCAAGGCCCAAGGCTTAAAGGCCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCCAAGGCCAAGGCCCAAGGCCCAAGGCCCAAGGCAAGGCCAAGGCCAAGGCCAAGGCCAAGGCCAAGGCCAAGGCCAAGGCCAAGGCCAAGGCCAAGGCAAGGCAAGGCAAGGCAAGGCAAGGCAAGGCAAGGCAAGGCAAGGCAAGGCAAGGCAAGGCAAGG	AAAATGGTTGGGCCCTGTTTGATAGCTTGCGGATTAAATGGTTGGCCATTGTTGATAGCTTGCGGATTAAATGGTTGGT

Figure 19 (cont. 3)

ANGGTGTAGTGCGAATTCATGAGGGCATGGTATGCCAGGTAAAGATGGCAGGGAGGCGAAATCGGTGCCCTGTCCAGGTGTGCTGAGTGCTAATACCTTAGAC ANGGATTGTGCGAATTCACGAAGGGTATGGGCAGGTAAAGATGGTAAGATGGTGAGTGCGAAATCGGTGCCCTATTGTGCGATCCTAATACATTAGAC CTGGTATTGTGCGGATTCACGAAGGCGCTGATTGGTAAGATGGTAAAGATGGTAAGATGGTGAAGTCGGCCCCTTTTAGAC CTGGTATTGTGCGGATTCACGAAGGCGCTGATTAGGCTAAAGATGGTAAGATGGTAAGATGGTAAGATCGACCCTCATTAAGAC CTGGTATTGTGCGGATTCACGAAGGCGCCTCAATAGGTAAGATGGTAAGATGGTAAGATGGTAAGATCGACCCTCATTTAGAC CTGGTATTGTGCGGATTCACGAAGGTAAGATAGGTAAAGATGGTAAGATGGTAAGATGGCGAATCGAAATTAGAC CTGGTATTGTGCGGATTCACGAAGGTAAGATAGGTAAAGATGGTAAGATGGTAAAGATGGTAAAGATGGTAAAGATGGTAAAGATGGTAAAGATTATAGAC CTGGTATTGTGCGGATTCACAATAGATAGGTAAAGATGGTAAACATGAAAGATGGTAAAGATGGTAAAGATTATAGAC CTGGTATTGTGCGAATTCACAAAGATAGGTAAAGATGGTAAAGATGGTAAAGATGGTAAAGATGGTAAAGATTATGAC CTGGTATTGTGCGAATTCATAAGATAGGTAAAGATTGGTAAAGATTATGAC CTGGTATTATGACAAAGATAGGTAAAGATAGGTAAAGATTATGAC CTGGTATTAGAAAAAAAAAA
tota/p.p.: 2260 tota/s.p.: AAGGTGTAGTGCGAATTCATGAAGGT tota/s.m.: AAGGATTGTGCGAATTCACGAAGGC tota/s.t.: CTGGTATTGTGCGGATTCACGAAGGC tota/s.t.: 2380 2400

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